

GRINDER PUMP STATION INSTALLATIONITEM 4076PART 1 – GENERALWORK INCLUDED: (Sec. 01)

Install Grinder Pump Station(s) in the locations indicated, or as directed by the Resident Representative, as indicated on Drawings and specified.

RELATED WORK: (Sec. 02)

Furnished/paid for in this Item:

Installation of electrical control panel or residential load center.
 Electrical Work at Grinder Pump & Installation
 Of Underground Cable
 PVC Pressure Pipe
 Polyethylene pressure pipe
 Polyethylene pressure pipe Lateral Kits I
 Bulk Concrete
 Granular Backfill
 Earth Excavation/Backfill

Furnished/paid for in respective Item:

Grinder pump supplied by others
 Topsoil
 Seeding
 Pavement, Curb, Gutter, Sidewalk

DESCRIPTION: (Sec. 03) Work generally includes installing complete factory built Grinder Pump Station(s), each consisting of grinder pump in a basin, pump removal system, shut-off valve, anti-siphon valve, and check valve assembly within the basin, lateral kit remote electrical alarm and control panel and all necessary internal wiring and controls, including installation and connection of 240-V cable between the unit and the remote panel.

QUALITY ASSURANCE: (Sec. 04) Material shall be new and of the best quality.

Actual appurtenances and controls which will be installed in the field, shall be particular to the tested pump only, a common set of appurtenances and controls for all pumps will not be acceptable. The Engineer reserves the right to inspect such testing procedures with representatives of the Owner.

REFERENCES: (Sec. 05)

NEMA - National Electrical Manufacturers Association
 NEC- National Electric Code

ODOT- Ohio Department of Transportation, Construction and Material Specifications

SUBMITTALS: (Sec. 06) Shop Drawings – See General Conditions.

DELIVERY, STORAGE, HANDLING: (Sec. 07) Units shall be delivered to the installation site, 100% completely assembled, ready for installation from the storage location.

Each unit shall have lifting eyes to facilitate unloading.

Handle with care so as not to damage units.

MEASUREMENT/PAYMENT: (Sec. 08) Payment per each, complete, delivered and stored.

WARRANTY: (Sec. 09) See General Conditions.

PART 2 – PRODUCTS

MANUFACTURERS: (Sec.10) Environment/One, Schenectady, New York, Model 2000, Series or equal.

Bedding Material

Crushed gravel – ODOT No. 8 gradation (included in installation cost).

PART 3 – EXECUTION

INSPECTION: (Sec. 11) Contractor and Resident Representative shall inspect each location where grinder pump station(s) is to be installed.

Final location to be determined in field.

INSTALLATION: (Sec. 12) Perform earth excavation/backfill for the installation of grinder pump station, appurtenant piping, etc.

Contractor shall be responsible for handling ground water to provide firm, dry subgrade for the structure, and shall guard against flotation or other damage result in from general water or flooding.

The grinder pump units shall not be set into excavation until the installation procedures and excavation have been approved by the Resident Representative. A concrete anti-flotation collar, as indicated on the Drawings shall be required and shall be pre-cast to the grinder pump. A six inch minimum layer of aggregate shall be used as bedding material under each unit.

The grinder pump shall be installed at a minimum depth of 4'-0" from grade to the top of the 1-1/4 inch discharge line. Finish grade shall be a minimum of six inches below the top of the accessway, and final grade shall slope away from the grinder unit.

Furnish and install one, five foot length of four inch diameter C-900 PVC pipe, with plugs, for service line(s).

ELECTRICAL: (Sec. 13) Electric service from each remote panel location to each station shall be provided in this reference Item 7000.

Electric service shall be placed in a separate trench, offset a minimum of 3 feet from the trench containing the service connection pipe, as far as practicable, in Item 7000.

FIELD QUALITY CONTROL: (Sec. 14) The Contractor shall provide the services of qualified factory trained technician(s) who shall inspect the placement and wiring of each station, perform field tests as specific herein, and instruct the Owner's personnel in the operation and maintenance of the equipment before the stations are accepted by the Owner. All equipment and materials, except water, necessary to perform testing shall be the responsibility of the named grinder pump manufacturer. This will include, as a minimum, a portable generator and ammeter. The Owner will be responsible to supply water for testing, as required. After the pump stations have been installed by the Contractor and the named grinder pump manufacturer, authorized factory trained technician(s) shall perform the following test on each station.

1. Fill the wet well with water to a depth sufficient to verify the high-high level alarm is operative.
2. Initiate pump operation to verify automatic "on/off" controls are operative.
3. Observe amperage readings to verify proper electrical conditions are met.

Station manufacturer shall provide:

1. Installation training – 1 day.
2. Service training – 2 days.
3. Start-up of stations – 2 weeks of 4 days each.

CLEAN-UP: (Sec. 15) Upon the completion of each installation, the Contractor shall remove and dispose of all debris and excess materials, and put the site in a neat and orderly condition.

Place topsoil and seed all disturbed area, as specified in their respective Item.